



LANDAU
ASSOCIATES,
INC.

Environmental and Geotechnical Services

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January 12, 1994

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SUPERFUND REMEDIAL BRANCH

Mr. Mike Kuntz
Washington State Department of Ecology
P.O. Box 47600,
Olympia, WA 98504-7600

RE: COLBERT LANDFILL RD/RA
MONTHLY PROGRESS REPORT
DECEMBER 1993

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Dear Mr. Kuntz:

Presented herein is the Progress Report for the Colbert Landfill Remedial Design/Remedial Action Superfund Project (Project) for the month of December 1993, which was prepared by Landau Associates, Inc., Spokane County's engineering consultant. This progress report addresses the reporting requirements specified in Section XI of the Project Consent Decree, including:

- Remedial action activities commenced or completed during the reporting period
- Remedial action activities projected to be commenced or completed through January 31, 1993
- Any problems that were encountered or are anticipated.

1.0 ACTIVITIES COMMENCED/COMPLETED DURING REPORTING PERIOD

- Construction by the contractor, Humphrey Construction, Inc. (Humphrey), of the Remedial Action (RA) continued. Landau Associates was onsite, continuously, to observe construction of RA facilities. Approximately 1070 lineal feet of groundwater conveyance pipeline was constructed during this reporting period. The groundwater conveyance piping for the south interception system is complete; the groundwater conveyance piping for the east interception system is complete; the groundwater conveyance piping for the west interception system is approximately 60 percent complete. The potable water supply pipeline to the treatment facility was constructed including metering facility and the fire hydrant. Reinforced concrete foundations for the air stripper, batch cleaning storage tank and equipment shed were constructed. The batch cleaning storage tank was delivered to the site. Contractor initiated work relating to the mechanical outfitting of the extraction wells late in this reporting period. The pre-engineered metal building was delivered to the site and the structural steel framing for the treatment facility building and equipment shed were erected. Approximately 98 percent of the underground electrical, instrumentation and control conduit

systems were installed at the treatment facility and at the wells. Approximately 90 percent of the electrical equipment has been delivered and is being stored in an offsite warehouse. Hardware for the instrumentation and control panels has been assembled and is being stored in an offsite warehouse. Approximately, 95 percent of the major equipment and product submittals for the groundwater extraction systems and treatment facility have been received, processed, and returned to the Contractor. The project is now estimated to be approximately 45 days behind schedule due to delays associated with protracted lead times for construction materials and equipment resulting from delayed submittals by the Contractor, a construction error by the Contractor in the building foundation, and weather impacts. Contractor has been requested to increase construction manpower and equipment at the site to get the project back on schedule and to prevent future slippage of the schedule.

- Ershigs (the air stripping system supplier) completed fabrication of the air stripping tower shell and most of the related ancillary equipment. The completed air stripping tower shell was delivered to and off-loaded at the Project site and is awaiting erection. Air stripping tower internals including the packing, support and distribution trays were delivered to the site. Ladders and platforms for the air stripping tower were delayed in fabrication and are anticipated to be delivered to the site in mid-January. Ershigs' preliminary performance test plan was submitted, reviewed and returned to the Ershigs as approved with comments.
- Applications for Federal Communication Commission licenses for the radio telemetry system were submitted.
- The results of the analysis of algal growth potential test results were compiled and evaluated.

2.0 ACTIVITIES/PROJECTS TO BE COMMENCED/COMPLETED DURING THE NEXT REPORTING PERIOD

Progress reports will be submitted monthly until construction is complete, as prescribed in the Project Consent Decree; consequently, the next reporting period will extend through January 31, 1993. Anticipated activities for January include:

- Continuing remedial action construction. Anticipated construction activities include:
 - Complete construction of groundwater conveyance piping.
 - Continue outfitting of groundwater extraction well vaults (electrical, instrumentation, piping, and pumps)
 - Construct remaining treatment facility foundations and floor slabs.
 - Erection of air stripping tower by mid-January, followed by the installation of internals and assembly of ancillary equipment commencing January 31.
 - Install electrical transformers, services, metering facilities, switch gear and motor control centers.

- Install batch cleaning storage tank.
- Continue software programming for the instrumentation, control, and monitoring systems. This activity is anticipated to be completed in late January.
- Complete erection of the treatment facility metal building and shed.
- Commence construction of treatment facility process piping and equipment.
- Submit final responses to EPA and Ecology comments on the final treatment and discharge plan (by mid-January).
- Submit a brief technical memorandum presenting results of algal growth potential study of the planned treated groundwater receiving water, the Little Spokane River. (by mid-January).
- Submit a feasibility report evaluating hydroelectric energy recovery from the treated groundwater discharge.
- Continue preparation of the Operation and Maintenance Plan and Manual for the Remedial Action facility. Submission of the Operations and Maintenance Plan is anticipated for February 1994.
- Submit a letter to Ecology regarding NPDES issues and Spokane County's intent to commence discharge of treated groundwater to the Little Spokane River concurrent with start-up of the remedial action facility.

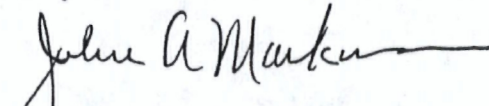
3.0 ENCOUNTERED/ANTICIPATED PROBLEMS

Harsh winter weather could slow or impair construction progress during the next reporting period, particularly if snow begins to accumulate. Construction is progressing and is anticipated to be complete by April 1994. Spokane County and Landau Associates conducted special progress meetings with the Contractor to emphasize the importance of getting the construction work completed on schedule and to ensure that all appropriate means are employed by the Contractor to prevent further slippage in the schedule. System start-up will require approximately 1 to 2 months following completion of construction, and it is anticipated that the remedial action will be operational by June 1994. Spokane County intends to monitor for the parameters identified in Ecology's letter dated December 22, 1992 unless it is agreed by all parties that there are additional substantive NPDES requirements.

This report describes progress on only the primary Project remedial action activities. There are peripheral activities associated with the primary activities which are not described herein. If clarification is required for any of the activities presented in this progress report, or if additional information is desired for peripheral activities, please contact Landau Associates or Dean Fowler (Spokane County).

LANDAU ASSOCIATES, INC.

By:


John A. Markus, P.E.
Project Manager

JAM/jam
No. 124002.120

cc: Neil Thompson, U.S. EPA
Dean Fowler, Spokane County
Lyle Diedieker, Ecology & Environment, Inc.



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ASSOCIATES,
INC.

Environmental and Geotechnical Services

COLSF 8.4 V1

December 13, 1993

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DEC 16 1993

SUPERFUND REMEDIAL BRANCH

Mr. Mike Kuntz
Washington State Department of Ecology
P.O. Box 47600,
Olympia, WA 98504-7600

**RE: COLBERT LANDFILL RD/RA
MONTHLY PROGRESS REPORT
December 1993**

Dear Mr. Kuntz:

Presented herein is the Progress Report for the Colbert Landfill Remedial Design/Remedial Action Superfund Project (Project) for the month of November 1993, which was prepared by Landau Associates, Inc., Spokane County's engineering consultant. This progress report addresses the reporting requirements specified in Section XI of the Project Consent Decree, including:

- Remedial action activities commenced or completed during the reporting period
- Remedial action activities projected to be commenced or completed through November 30, 1993
- Any problems that were encountered or are anticipated.

1.0 ACTIVITIES COMMENCED/COMPLETED DURING REPORTING PERIOD

- Construction by the contractor, Humphrey Construction, Inc. (Humphrey), of the Remedial Action (RA) continued. Landau Associates was onsite, continuously, to observe construction of RA facilities. Approximately 6020 lineal feet of groundwater conveyance pipeline was constructed during this reporting period. The groundwater conveyance piping for the south interception system is approximately 95 percent complete; the groundwater conveyance piping for the east interception system is approximately 80 percent complete; the groundwater conveyance piping for the west interception system is approximately 20 percent complete. The two remaining groundwater well vaults were installed, so all ten well vaults are now installed. Approximately 90 percent of the underground electrical instrumentation and control conduit systems were installed at the treatment facility. Approximately 20 percent of the electrical equipment has been delivered and is being stored in an offsite warehouse. Hardware for the instrumentation and control panels has been assembled and is being stored

in an offsite warehouse. Some of the site improvements were constructed including: building perimeter drain interception system, two storm water dry wells, the building septic tank and leach field. The treatment facility site was rough graded. Tents were constructed at the treatment facility to allow for continuation of construction activities during the cold winter weather. Approximately, 92 percent of the major equipment and product submittals for the groundwater extraction systems and treatment facility have been received, processed, and returned to the Contractor. The project is estimated to be approximately 30 days behind schedule due to delays associated with obtaining the building permit, protracted lead times for construction materials and equipment associated with delayed submittals by Humphrey, and weather impacts. Humphrey has been requested to increase construction manpower and equipment at the site to get the project back on schedule and to prevent future slippage of the schedule before the onset of severe winter weather conditions.

- Shop drawings and product submittals for the air stripping treatment equipment were submitted by the contractor, Ershigs, Inc. (Ershigs), and reviewed and processed by Landau Associates. We visited the Ershigs facility to inspect the partially fabricated air stripping tower shell. All air stripping equipment components were released for fabrication, although some equipment issues are still pending. Submittals for 90 percent of the air stripping equipment were received, processed, and returned to Ershigs. Delivery of the air stripping treatment equipment to the project site is contractually on schedule. The fan and appurtenances and the air stripping tower anchor bolts have been delivered to the site.
- Final results from the last round of water quality sampling and algal growth potential studies for the Little Spokane River were received late in the month. Analysis of these results has commenced.

2.0 ACTIVITIES/PROJECTS TO BE COMMENCED/COMPLETED DURING THE NEXT REPORTING PERIOD

Progress reports will be submitted monthly until construction is complete, as prescribed in the project Consent Decree; consequently, the next reporting period will extend through December 31, 1993. Anticipated activities for December include:

- Continuing remedial action construction. Anticipated construction activities include:
 - Construction of groundwater conveyance piping
 - Outfitting of groundwater extraction well vaults (electrical, instrumentation, piping, and pumps)
 - Construction of treatment facility foundations, floor slabs, subsurface piping, underground electrical, and other components.
 - Delivery of air stripping treatment equipment, including the tower shell, to the site.

- Delivery of electrical switch gear and motor control centers.
 - Delivery of batch cleaning storage tank.
 - Software programming for the instrumentation, control, and monitoring system will continue and is expected to be completed in late December or early January.
 - Delivery and erection of the metal treatment facility building and shed.
 - Construction of treatment facility process piping and equipment will commence.
- Submitting applications for Federal Communication Commission licenses for the radio telemetry system transmission equipment, which is an essential component of the integrated control system for the groundwater extraction systems and treatment facility.
 - Continuing fabrication of the air stripping treatment equipment. Some of the ancillary process equipment for the air stripping system will be delivered to the site. Remaining equipment and performance test plan submittals will be received and reviewed.
 - Preparing a letter addressing EPA and Ecology comments on the final treatment and discharge plan (by late December).
 - Submitting a report presenting results of algal growth potential study of the planned treated groundwater receiving water (i.e. Little Spokane River). The report will be submitted to EPA and Ecology for consideration in establishing the conditions for the National Pollutant Discharge Elimination System (NPDES) permit (by mid December).
 - Preparing and submitting a report evaluating the feasibility of hydroelectric energy recovery from the treated groundwater discharge.
 - Preparing the Operation and Maintenance Manual for the Remedial Action facility.

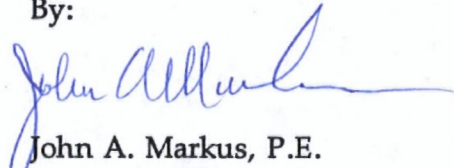
3.0 ENCOUNTERED/ANTICIPATED PROBLEMS

The delivery date for the air stripping tower is no longer a problem due to slippage in the general construction schedule. FCC applications were not submitted last month as planned due to problems with resolving the specific locations for the antenna poles. Weather delays were experienced due to colder than normal temperatures during late November. Continued harsh winter weather could slow or impair construction progress during the next reporting period, particularly if snow begins to accumulate. Construction is progressing and is anticipated to be complete by late March 1994. System start-up will require approximately 1 to 2 months following completion of construction, and it is anticipated that the remedial action will be fully operational by May or June 1994.

This report describes progress on only the primary Project remedial action activities. There are peripheral activities associated with the primary activities which are not described herein. If clarification is required for any of the activities presented in this progress report, or if additional information is desired for peripheral activities, please contact Landau Associates or Dean Fowler (Spokane County).

LANDAU ASSOCIATES, INC.

By:



John A. Markus, P.E.
Project Manager

JAM/bb

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cc: Neil Thompson, U.S. EPA
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